

## Claims

What is claimed is:

- Handwritten: Add D1, Sub E1*
1. An optical interlink comprising:  
a light pipe having a first end optically coupled to an optical transducer and a second end arranged to provide an optical data port.
  2. The optical interlink of claim 1 wherein the optical transducer capable of transmitting and receiving information optically.
  3. The optical interlink of claim 2 wherein the optical transducer uses infra-red light to transmit and receive information.
  4. The optical interlink of claim 1 wherein the light pipe further comprising a receive light pipe and a transmit light pipe.
  5. The optical interlink of claim 4 wherein the transmit light pipe further comprising:  
a first lens between the first end of the light pipe and the optical transducer, the first formed to optically couple the optical transducer to the transmit light pipe; and  
a second lens placed to increase an angle of light exiting optical data port.
  6. The optical interlink of claim 5 wherein the first lens and second lens being formed as part of the transmit light pipe.
  7. The optical interlink of claim 4 wherein the receive light pipe further comprising:  
a first lens between the first end of the light pipe and the optical transducer, the first lens formed to optically couple the optical transducer to the receive light pipe; and  
a second lens placed to collimate light received at the optical data port into the second end of the light pipe.

1           8.     The optical interlink of claim 7 wherein the first lens being formed as  
2 part of the receive light pipe.

1           9.     An optical interlink comprising:  
2                 an optical transducer capable of optically exchanging information;  
3                 a light pipe having a first end and a second end arranged to provide an  
4 optical data port; and  
5                 a first lens formed to collimate light between the first end of the light  
6 pipe and the optical transducer.

1           10.    The optical interlink of claim 9 wherein the optical transducer uses  
2 infra-red light to transmit and receive information

1           11.    The optical interlink of claim 2 wherein the light pipe further  
2 comprising a receive light pipe and a transmit light pipe.

1           12.    The optical interlink of claim 2 wherein the light pipe further  
2 comprising:  
3                 a transmit lens that increases an angle of illumination of light exiting  
4 the optical data port; and  
5                 a receive lens that couples light incident on the optical data port into  
6 the light pipe.

1           13.    A printer comprising:  
2                 a print engine;  
3                 a controller connected to the print engine, the controller controlling  
4 operation of the print engine, the controller including an optical transducer capable  
5 of optically transmitting and receiving information; and  
6                 a light pipe having a first end optically coupled to the optical  
7 transducer and a second end arranged to provide an optical data port.

1           14.    The printer of claim 13 wherein the optical transducer uses infra-red  
2 light to transmit and receive information.

1           19. The printer of claim 18 wherein the first lens being formed as part of  
2 the receive light pipe.